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	First Named Inventor	John V. Frangioni
	Art Unit	3736
	Examiner Name	
Total Number of Pages in this Submission	Attorney Docket Number	14952.0320

ENCLOSURES (check all that apply)				
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<table border="1" style="width: 100%;"><tr><td style="width: 20%;">Remarks</td><td></td></tr></table>			Remarks	
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SIGNATURE OF APPLICANT, ATTORNEY OR AGENT			
Firm Name	STEPTOE & JOHNSON LLP		
Signature			
Printed Name	Harold H. Fox		
Date	10-21-04	Reg. No.	41,498

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : John V. Frangioni et al. Art Unit : 3736
Appl. No. : 10/772,424 Examiner : Unknown
Filed : February 6, 2004
Title : MATERIALS AND METHODS FOR NEAR-INFRARED AND INFRARED
 INTRAVASCULAR IMAGING

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INFORMATION DISCLOSURE STATEMENT

Applicant submits the references listed on the attached form PTO-1449. This statement is being filed before the receipt of a first Office Action on the merits. Please apply any charges or credits to Deposit Account No. 19-4293.

Respectfully submitted,

Date: 10-21-04



Harold H. Fox
Reg. No. 41,498

Steptoe & Johnson LLP
1330 Connecticut Avenue, NW
Washington, DC 20036-1795
Phone: 202-429-3000
Fax: 202-429-3902

Substitute Form PTO-1449 (Modified) Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 14952.0320	Application No. 10/772,424
	Applicant John V. Frangioni et al.		
	Filing Date February 6, 2004	Group Art Unit 3736	

U.S. Patent Documents

Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,262,357	11/16/1993	Alivisatos et al.			
	AB	5,505,928	04/09/1996	Alivisatos et al.			
	AC	5,525,377	06/11/1996	Gallagher et al.			
	AD	5,537,000	07/16/1996	Alivisatos et al.			
	AE	5,585,640	12/17/1996	Huston et al.			
	AF	5,674,698	10/07/1997	Zarling et al.			
	AG	5,677,545	10/14/1997	Shi et al.			
	AH	5,751,018	05/12/1998	Alivisatos et al.			
	AI	5,985,173	11/16/1999	Grey et al.			
	AJ	5,985,353	11/16/1999	Lawton et al.			
	AK	5,990,479	11/23/1999	Weiss et al.			
	AL	6,054,495	4/25/2000	Markowitz et al.			
	AM	6,114,038	9/5/2000	Castro et al.			
	AN	6,139,585	10/31/2000	Li			
	AO	6,207,229	3/27/2001	Bawendi et al.			
	AP	6,251,303	6/26/2001	Bawendi et al.			
	AQ	6,306,610	10/23/2001	Bawendi et al.			
	AR	6,319,426	11/20/2001	Bawendi et al.			
	AS	6,326,144	12/4/2001	Bawendi et al.			
	AT	6,379,635	4/30/2002	O'Brien et al.			
	AU	6,337,117	1/8/2002	Maenosono et al.			
	AV	6,444,143	9/3/2002	Bawendi et al.			
	AW	6,447,698	9/10/2002	Ihara et al.			
	AX	6,501,091	12/31/2002	Bawendi et al.			
	AY	6,548,168	4/15/2003	Mulvaney et al.			
	AZ	6,548,171	4/15/2003	Barbera-Guillem et al.			
	AAA	2002/0066401	6/6/2002	Peng et al.			

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U.S. Patent Documents

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	ABB	2003/0017264	1/23/2003	Treadway et al.			
	ACC	2003/0042850	3/6/2003	Bertram et al.			

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	ADD	WO 98/04740	02/05/1998	PCT				
	AEE	WO 98/33070	07/30/1998	PCT				
	AFF	WO 00/27365	5/18/2000	PCT				
	AGG	WO 00/27436	5/18/2000	PCT				
	AHH	WO 00/28088	5/18/2000	PCT				
	AII	WO 00/28089	5/18/2000	PCT				

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	AJJ	Akerman et al., <i>Proc. Natl. Acad. Sci. USA</i> 99:12617-12621 (2002)
	AKK	Alivisatos et al., "Organization of 'nanocrystal molecules' using DNA," <i>Nature</i> , 382:609-611, August 15, 1996
	ALL	Alivisatos et al., "Semiconductor Clusters, Nanocrystals, and Quantum Dots," <i>Science</i> , 271:933-937, 1996
	AMM	Alivisatos, "Perspectives on the Physical Chemistry of Semiconductor Nanocrystals" <i>J. Phys. Chem.</i> 1996(100):13226-13239, 1996
	ANN	Anderson and Parrish, <i>J. Invest. Dermatol.</i> 77:13-19 (1981)
	AOO	Bawendi et al., "Luminescence properties of CdSe quantum crystallites: resonance between interior and surface localized states," <i>J. Chem. Phys.</i> , 96(2):946-954, January 15, 1992
	APP	Becker et al., <i>Nature Biotechnol.</i> 19:327-31 (2001)
	AQQ	Beverloo et al., "Preparation and Microscopic Visualization of Multicolor Luminescent Immunophosphors," <i>Cytometry</i> , 13:561-570, 1992
	ARR	Bruchez et al., "Semiconductor Nanocrystals as Fluorescent Biological Labels," <i>Science</i> , 281:2013-2016, September 25, 1998
	ASS	Bugaj et al., <i>J. Biomed. Opt.</i> 6:122-33 (2001)
	ATT	Cao and Banin, <i>J. Am. Chem. Soc.</i> 122:9692-9702 (2000)
	AUU	Cerussi et al., <i>Acad. Radiol.</i> 8:211-218 (2001)

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Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	AVV	Chan et al., "Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection," <i>Science</i> , 281:2016-2018, 1998
	AWW	Chan et al., <i>Curr Opin Biotechnol</i> 13:40-46 (2002)
	AXX	Chance, <i>Ann. N.Y. Acad. Sci.</i> 838:29-45 (1998)
	AYY	Chen et al., <i>Mat. Res. Soc. Symp. Proc.</i> 691:359-364 (2002)
	AZZ	Cheong et al., <i>IEEE J. Quantum Electronics</i> 26, 2166-2195 (1990)
	AAAA	Coffer et al., "Characterization of quantum-confined CdS nanocrystallites stabilized by deoxyribonucleic acid (DNA)," <i>Nanotechnology</i> , 3:69-76, 1992
	ABBB	Conway et al., <i>Am. J. Clin. Nutr.</i> 40:1123-1130 (1984)
	ACCC	Correa-Duarte et al., "Stabilization of CdS semiconductor nanoparticles against photodegradation by silica coating procedure," <i>Chem. Phys. Lett.</i> , 286:497-501, April 17, 1998
	ADDD	Dabbousi, et al., "(CdSe)ZnS core-shell quantum dots: synthesis and characterization of a size series of highly luminescent nanocrystallites" <i>J. of Phys. Chem. B</i> 101(46):9463-9475, November 13, 1997
	AEEE	Danek et al., "Synthesis of Luminescent Thin-Film CdSe/ZnSe Quantum Dot Composites Using CdSe Quantum Dots Passivated with an Overlayer of ZnSe" <i>Chem. Mater.</i> 8(1):173-180, 1996
	AFFF	Du et al., <i>Phys. Med. Biol.</i> 46:167-81 (2001)
	AGGG	Dubertret et al., <i>Science</i> 298:1759-1762 (2002)
	AHHH	Fridolin et al., <i>Phys. Med. Biol.</i> 45:3779-3792 (2000)
	AIII	Gan et al., "Enhanced Photoluminescence and Characterization of Mn-Doped ZnS Nanocrystallites Synthesized in Microemulsion" <i>Langmuir</i> 1997(13):6427-6431, 1997
	AJJJ	Gao et al., "Strongly Photoluminescent CdTe Nanocrystals by Proper Surface Modification," <i>J. Phys. Chem.</i> , 102:8360-8363, 1998
	AKKK	Gaponik et al., <i>J. of Phys. Chem. B</i> 106:7177-7185 (2002)
	ALLL	Gardner et al., <i>Lasers Surg. Med.</i> 18:129-138 (1996)
	AMMM	Gerion et al., <i>J. Am. Chem. Soc.</i> 124:7070-7074 (2002)
	ANNN	Goldman, E.R., et al., 2002 <i>J. Am. Chem. Soc.</i> 124, 6378
	AOOO	Goldman et al., <i>Anal. Chem.</i> 74:841-847 (2002)
	APPP	Guzelian et al., <i>Applied Physics Letters</i> 69, 1432-1434 (1996)
	AQQQ	Han M. et al., "Quantum-dot-tagged microbeads for multiplexed optical coding of biomolecules," <i>Nature Biotech.</i> 19:631-635.
	ARRR	Harrison et al., <i>Materials Science & Engineering, B: Solid-State Materials for Advanced Technology</i> B69-70:355-360 (2000)
	ASSS	Hines et al., "Synthesis and Characterization of Strongly Luminescing ZnS-Capped CdSe Nanocrystals" <i>J. Phys. Chem.</i> 100:468-471, January 1996
	ATTT	Jacques, Vol. 1999, Oregon Medical Laser Center News (1999)

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	AUUU	Jaiswal <i>et al.</i> , "Long-term multiple color imaging of live cells using quantum dot bioconjugates," <i>Nature Biotechnol.</i> 21:1, 47-51, January 2003
	AVVV	Jarvis <i>et al.</i> , "Solution Synthesis and Photoluminescence Studies of Small Crystallites of Cadmium Telluride," <i>Mat. Res. Soc. Symp. Proc.</i> , 272:229-234, 1992
	AWWW	Kershaw <i>et al.</i> , <i>IEEE Journal of Selected Topics in Quantum Electronics</i> 6, 534-543 (2000)
	AXXX	Klarreich, <i>Nature</i> 413:450-452 (2001)
	AYYY	Kortan <i>et al.</i> , "Nucleation and Growth of CdSe on ZnS Quantum Crystallite Seeds, and Vice Versa, In Inverse Micelle Media" <i>J. Am. Chem. Soc.</i> 112:1327-1332, 1990
	AZZZ	Kou, L. <i>et al.</i> , <i>Appl. Opt.</i> 32:3531-3540 (1993)
	AAAAA	Kuenstner <i>et al.</i> , <i>Biospectroscopy</i> 3:225-232 (1997)
	ABBBB	Kuno <i>et al.</i> , "The band edge luminescence of surface modified CdSe nanocrystallites: Probing the luminescing state" <i>J. Chem. Phys.</i> 106(23):9869-9882, June 1997
	ACCCC	Lawless <i>et al.</i> , "Bifunctional Capping of CdS Nanoparticles and Bridging to TiO ₂ " <i>J. Phys. Chem.</i> 99:10329-10335, 1995
	ADDDD	Lee <i>et al.</i> , "Surface Derivatization of Nanocrystalline CdSe Semiconductors," <i>Mat. Res. Soc. Symp. Proc.</i> , 452:323-328, 1997
	AEEEE	Lee, J. <i>et al.</i> , "Full Color Emission from II-VI Semiconductor Quantum Dot-Polymer Composites," <i>Adv. Mater.</i> 12:1102-1105, 2000.
	AFFFF	Liz-Marzan <i>et al.</i> , "Synthesis of Nanosized Gold-Silica Core-Shell Particles" <i>Langmuir</i> 12:4329-4335, 1996
	AGGGG	Ludolph, B., <i>et al.</i> , "Novel single molecule precursor routes for the direct synthesis of highly monodispersed quantum dots of cadmium or zinc sulfide or selenide," <i>Chem. Commun.</i> 1998: 1849-1850, 1998.
	AHHHH	Mahtab <i>et al.</i> , "Preferential-absorption of a 'kinked' DNA to a newtral curved surface: comparison to and implications for nonspecific DNA-protein interactions," <i>J. Am. Chem. Soc.</i> , 118:7028-7032, July 31, 1996
	AIIII	Mahtab <i>et al.</i> , "Protein-sized quantum dot luminescence can distinguish between 'straight', 'bent', and 'kinked' oligonucleotides," <i>J. Am. Chem. Soc.</i> , 117:9099-9100, September 6, 1995
	AJJJJ	Matsumoto <i>et al.</i> , "Preparation of Monodisperse CdS Nanocrystals by Size Selective Photocorrosion" <i>J. Phys. Chem.</i> 100(32):13781-13785, 1996
	AKKKK	Mattoussi, H., <i>et al.</i> "Self-assembly of CdSe-ZnS Quantum Dot Bioconjugates Using an Engineered Recombinant Protein," <i>J. Am. Chem. Soc.</i> 122:12142-12150, 2000.
	ALLLL	Mikulec <i>et al.</i> , "Fluorescent semiconductor nanocrystallites derivatized with biomolecules" <i>Amer. Chem. Soc. Nat'l Meeting</i> , Boston, MA, August 24, 1998
	AMMMM	Mourant <i>et al.</i> , <i>Appl. Opt.</i> 36:949-957 (1997)
	ANNNN	Murphy <i>et al.</i> , "Quantum dots as inorganic DNA-binding proteins," <i>Mat. Res. Soc. Symp.</i> , 452:597-600, 1997
	AOOOO	Murray <i>et al.</i> , "Synthesis and Characterization of Nearly Monodisperse CdE (E=S, Se, Te) Semiconductor Nanocrystallites" <i>J. Am. Chem. Soc.</i> 115(19):8706-8715, 1993
	APPPP	Murray <i>et al.</i> , <i>IBM Journal of Research and Development</i> 45:47-56 (2001)

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Examiner Initial	Desig. ID	Document
	AQQQQ	Nakayama <i>et al.</i> , "Functional near-infrared fluorescence imaging for cardiac surgery and targeted gene therapy," <i>Molecular Imaging</i> (2002)
	ARRRR	Nirmal <i>et al.</i> , "Fluorescence Intermittency in single Cadmium Selenide Nanocrystals" <i>Nature</i> 383:802-804, October 1996
	ASSSS	Pathak S., <i>et al.</i> , 2001 <i>J. Am. Chem. Soc.</i> 123, 4103
	ATTTT	Pehnt <i>et al.</i> , "Nanoparticle Precursor Route to Low-Temperature Spray Deposition of CdTe Thin Films," <i>Appl. Phys. Lett.</i> , 67(15):2176-2178, October 9, 1995
	AUUUU	Peng <i>et al.</i> , "Epitaxial Growth of Highly Luminescent CdSe/CdS Core/Shell Nanocrystals with Photostability and Electronic Accessibility," <i>J. Am. Chem. Soc.</i> , 119:7019-7029, July 30, 1997
	AVVVV	Peng <i>et al.</i> , "Synthesis and Isolation of a Homodimer of Cadmium Selenide Nanocrystals," <i>Angewandte Chemie</i> , 36:145-147, February 3, 1997
	WWWWW	Rajh <i>et al.</i> , "Synthesis and Characterization of Surface-Modified Colloidal CdTe Quantum Dots" <i>J. Phys. Chem.</i> 97:11999-12003, Nov. 1993
	AXXXX	Rogach <i>et al.</i> , "Synthesis and characterization of Thiol-Stabilized CdTe Nanocrystals" <i>Ber. Bunsenges. Phys. Chem.</i> 100(11):1772-2778, 1996
	AYYYY	Rogach <i>et al.</i> , <i>Advanced Materials (Weinheim, Germany)</i> 11:552-555 (1999)
	AZZZZ	Rosenthal <i>et al.</i> , <i>J. Am. Chem. Soc.</i> 124:4586-4594 (2002)
	AAAAA	Spanhel <i>et al.</i> , "Photochemistry of Colloidal Semiconductors. Surface Modification and Stability of Strong Luminescing CdS Particles" <i>J. Am. Chem. Soc.</i> 109(19):5649-5655, 1987
	ABBBBB	Steigerwald <i>et al.</i> , "Surface Derivatization and Isolation of Semiconductor Cluster Molecules," <i>J. Am. Chem. Soc.</i> , 110:3046-3050, 1988
	ACCCCC	Szekeres <i>et al.</i> , <i>J. Cardiovasc. Pharmacol.</i> 38:584-92 (2001)
	DDDDD	van Staveren <i>et al.</i> , <i>Applied Optics</i> 30:4507-4514 (1991)
	AEEEE	Wan <i>et al.</i> , <i>Photochem. Photobiol.</i> 34:679-681 (1981)
	AFFFFF	Wang, Y.A., <i>et al.</i> , 2002 <i>J. Am. Chem. Soc.</i> 124, 2293
	GGGGG	Weissleder <i>et al.</i> , <i>Nature Biotechnol.</i> 17:375-378 (1999)
	HHHHH	Weissleder, <i>Nature Biotechnol.</i> 19:316-7 (2001)
	AIIII	Whitesell, "Directionally Aligned Helical Peptides on Surfaces", <i>Science</i> , 261:73-75, July 2, 1993
	AJJJJ	Wu <i>et al.</i> , "Immunofluorescent labeling of cancer marker Her2 and other cellular targets with semiconductor quantum dots," <i>Nature Biotechnology</i> 21:1, 41-46, January 2003
	KKKKK	Zaheer <i>et al.</i> , <i>Nature Biotechnol.</i> 19:1148-1154 (2001)

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